

REMARKS

Applicants submit this Reply in response to the non-final Office Action mailed July 7, 2009. Prior to this response, claims 47-84 were pending. By this Reply, Applicants have amended claims 47, 50, 51, 65, 76, 78, 80, and 81 and canceled claims 48 and 49 without prejudice or disclaimer. As a result, claims 47 and 50-84 are submitted for examination, of which claim 47 is the sole independent claim. No new matter has been added.

In the Office Action, the Examiner rejected claims 47-83 under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. No. 4,814,130 ("Shiromatsu"); and rejected claim 84 under 35 U.S.C. § 103(a) as being unpatentable over Shiromatsu.

In this Reply, Applicants have amended independent claim 47 to recite, among other things:

A process for continuously producing an elastomeric composition, comprising: . . . discharging a resulting elastomeric composition from the at least one extruder; cooling the resulting elastomeric composition discharged from the at least one extruder; and passing the resulting cooled elastomeric composition through at least one static mixer.

Support for this amendment can be found at least at previously-pending dependent claims 48 and 49, and in Applicants' specification at page 19, lines 2-25 and Figures 3 and 5.

Applicants respectfully traverse all pending rejections for at least the reasons outlined below.

Rejections Under 35 U.S.C. § 102(b)

Applicants respectfully traverse the rejection of claims 47-83 under 35 U.S.C. § 102(b) as being anticipated by Shiromatsu. In order to properly establish that

Shiromatsu anticipates Applicants' claimed invention under 35 U.S.C. § 102, every element of the claims in issue must be found, either expressly or described under principles of inherency, in that single reference. Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the... claim." See M.P.E.P. § 2131, quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

Shiromatsu does not disclose every element of Applicants' claimed invention. Amended independent claim 47 recites, in part, "discharging a resulting elastomeric composition from the at least one extruder; cooling the resulting elastomeric composition discharged from the at least one extruder; and passing the resulting cooled elastomeric composition through at least one static mixer." On the other hand, Shiromatsu teaches only a sequence of steps for processing an expanded polymer which is opposite to those recited in Applicants' amended claims. Specifically, Shiromatsu suggests cooling the composition to be extruded within a static mixer before passing the composition through an extrusion head provided at the discharge opening of the equipment. Thus, Shiromatsu does not disclose, "discharging a resulting elastomeric composition from the at least one extruder; cooling the resulting elastomeric composition discharged from the at least one extruder; and passing the resulting cooled elastomeric composition through at least one static mixer."

For at least this reason, Applicants request the Examiner reconsider and withdraw the rejection of amended independent claim 47 under 35 U.S.C. § 102(b) over Shiromatsu.

Moreover, claims 50-83 depend from claim 47 and, thus, contain all the elements and limitations thereof. Accordingly, Applicants also request the Examiner reconsider and withdraw the rejections of dependent claims 50-83 as they are allowable at least due to their corresponding dependence from independent claim 47.

Rejections Under 35 U.S.C. § 103(a)

Applying 35 U.S.C. § 103(a), the Examiner also rejected claim 84 as being unpatentable over Shiromatsu. Applicants respectfully traverse each of these claim rejections because the Office Action has failed to establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, “the prior art reference (or references when combined) must teach or suggest all the claim limitations.” M.P.E.P. § 2142. Moreover, “in formulating a rejection under 35 U.S.C. § 103(a) based upon a combination of prior art elements, it [is] necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed.” USPTO Memorandum from Margaret A. Focarino, Deputy Commissioner for Patent Operations, May 3, 2007, page 2.

A *prima facie* case of obviousness has not been established because, among other things, Shiromatsu does not teach or suggest every feature of Applicants’ claims. As outlined previously herein, Shiromatsu does not teach or suggest at least “discharging a resulting elastomeric composition from the at least one extruder; cooling the resulting elastomeric composition discharged from the at least one extruder; and passing the resulting cooled elastomeric composition through at least one static mixer,” as recited in amended independent claim 47. The Examiner cites no secondary reference to cure this deficiency.

Accordingly, because claim 84 depends from independent claim 47 and thus, contains all the elements and limitations thereof, Applicants request the Examiner reconsider and withdraw the rejection of dependent claim 84 under 35 U.S.C. § 103(a) over Shiromatsu.

Furthermore, Shiromatsu actually teaches away from Applicants' claimed invention and, as a result, cannot be properly combined with other references to teach or suggest elements of Applicants' claims.

Shiromatsu relates to a method of manufacturing an extruded product of a fire-retardant silane cross-linked polyolefin composition and, more particularly, to a method of manufacturing an extruded product (e.g., a fire-retardant cross-linked polyolefin insulated wire) of a fire-retardant cross-linked polyolefin composition by silicone grafting (Col. 1, lines 7-13).

Within this particular and different technical field, Shiromatsu aims to provide a method for manufacturing an extruded product of a fire-retardant silane cross-linked polyolefin composition which avoids the formation of bubbles while possessing a high degree of crosslinking (Col. 2, lines 12-31).

More specifically, it is an object of Shiromatsu to provide an easy, low-cost method of manufacturing an extruded product at a high grafting rate according to a one-step method without causing generation of bubbles, the extruded product being prepared using a fire-retardant composition of a type normally subjected to generation of bubbles when it is extruded by the one-step method (Col. 2, lines 65-68; Col. 3, lines 1-4).

According to Shiromatsu, and as discussed above, this object is achieved by cooling a molten resin composition which undergoes silane grafting before extruding the same and forming products (Col. 2, lines 35-42).

Shiromatsu teaches that in order to avoid the formation of bubbles while ensuring a sufficient degree of cross-linking a cooling zone must be formed between an extruder and a crosshead to set a uniform temperature of a kneaded resin composition in a molten state so that the composition temperature is cooled to a desired temperature, and preferably to 100°C to 170°C before passing through the extrusion head (Col. 3, lines 17-22; Col. 5, lines 15-23, Example 1 and Fig. 1).

Additionally, Shiromatsu never mentions that the “polymer” to be processed is an elastomeric composition (which presents *per se* particular difficulties in terms of ingredient dispersion as is well known in the art and as is explained in the introductory part of Applicants’ specification).

Accordingly, a person skilled in the art would have had no reasonable motivation to consider the teachings of Shiromatsu when trying to solve the stated problem of ensuring an excellent uniformity of the physical-chemical properties of a different composition of matter, i.e. an elastomeric composition including at least one filler and optionally other minor ingredients, exiting from an extrusion apparatus.

Even assuming otherwise, a person skilled in the art would have never arrived at the present invention, since this reference never suggests that to solve the different problem of providing a process and an apparatus for continuously producing an elastomeric composition including at least one filler and optionally other minor ingredients, which are capable of ensuring an excellent uniformity of the physical-

chemical properties of the elastomeric composition exiting from the extrusion apparatus, the following process steps should be carried out:

- discharging a resulting elastomeric composition from the at least one extruder,
- cooling the resulting elastomeric composition discharged from the extruder, and
- passing the resulting discharged cooled elastomeric composition through at

least one static mixer.

According to Shiromatsu, the step of passing the resulting discharged and cooled elastomeric composition through at least one static mixer after the extrusion head would make no sense at all. Thus, Shiromatsu would have led a person skilled in the art away from Applicants' claims.

Claim Scope

It is to be understood that Applicants are in no way intending to limit the scope of the claims to any exemplary embodiments described in the specification, abstract, and/or shown in the drawings. Rather, Applicants believe that they are entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation, and applicable case law.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

If the Examiner believes that a telephone conversation might advance prosecution of this application, the Examiner is cordially invited to call Applicants' undersigned attorney at (404) 653-6435.

Applicants respectfully submit that the Office Action contains a number of assertions concerning the related art and the claims. Regardless of whether those assertions are addressed specifically herein, Applicants respectfully decline to automatically subscribe to them.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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